LIMETREE BAY
REFINING, LLC

April 26, 2021

Mr. Austin F. Callwood, Director
Division of Environmental Protection
Department of Planning & Natural Resources
45 Mars Hill
Frederiksted, V.I. 00840-4474

SUBJECT: No. 8 Flare H_2S Exceedances – April 19, 2021 to April 22, 2021

Dear Mr. Callwood:

This letter is submitted in compliance with Condition No. 2.4.5.1 of Limetree Bay Title V permit as a follow-up to the email notifications to Ms. Verline Marcellin of the Division of Environmental Protection on April 19, 2021 at 9:41 AM and 5:13 PM regarding the H_2S exceedances at the No. 8 Flare.

The Continuous Emissions Monitoring System (CEMS) recorded H_2S concentrations in the No. 8 Flare header in excess of 0.1 gr/dscf (162 ppm) based on a 3-hr rolling average (ref. Title V permit condition 3.2.5.5 & 3.2.5.6) intermittently from April 19, 2021 to April 22, 2021.

The following table provides 1-hr and 3-hr H_2S concentrations at the No. 8 Flare during the exceedance events.

Source		FLARE08
Parameter		H2SPPMD
Unit		(PPM)
04/19/21	05:00	71.9
04/19/21	06:00	158.4
04/19/21	07:00	162.7
04/19/21	08:00	162.5
04/19/21	09:00	76.1
04/19/21	10:00	106.9
04/19/21	11:00	102.5
04/19/21	12:00	103.9
04/19/21	13:00	73.8
04/19/21	14:00	92.8
04/19/21	15:00	84.7
04/19/21	16:00	557.8
04/19/21	17:00	2,736.7
04/19/21	18:00	3,094.9
04/19/21	19:00	2,630.7
04/19/21	20:00	1,844.4
04/19/21	21:00	9,569.6
04/19/21	22:00	20,675.3
04/19/21	23:00	31,546.5
04/20/21	00:00	36,997.7
04/20/21	01:00	39,475.7
04/20/21	02:00	38,784.1
04/20/21	03:00	26,777.5
04/20/21	04:00	13,932.6

Source		FLARE08
Parameter		H2SPPMD
Unit		(PPM)
04/20/21	05:00	2,828.1
04/20/21	06:00	2,339.0
04/20/21	07:00	2,122.1
04/20/21	08:00	2,172.8
04/20/21	09:00	1,788.1
04/20/21	10:00	1,828.2
04/20/21	11:00	1,748.4
04/20/21	12:00	1,517.4
04/20/21	13:00	1,348.4
04/20/21	14:00	1,296.9
04/20/21	15:00	1,540.2
04/20/21	16:00	2,148.4
04/20/21	17:00	2,533.5
04/20/21	18:00	2,405.3
04/20/21	19:00	1,775.0
04/20/21	20:00	1,384.2
04/20/21	21:00	1,295.6
04/20/21	22:00	1,309.0
04/20/21	23:00	1,356.3
04/21/21	00:00	1,227.1
04/21/21	01:00	1,289.7
04/21/21	02:00	2,167.7
04/21/21	03:00	2,147.5
04/21/21	04:00	2,272.4

Source		FLARE08
Parameter		H2SPPMD
Unit		(PPM)
04/21/21	05:00	1,389.2
04/21/21	06:00	1,572.0
04/21/21	07:00	1,697.5
04/21/21	08:00	1,798.9
04/21/21	09:00	1,888.2
04/21/21	10:00	1,663.2
04/21/21	11:00	1,620.7
04/21/21	12:00	1,449.0
04/21/21	13:00	1,322.6
04/21/21	14:00	1,112.2
04/21/21	15:00	939.7
04/21/21	16:00	1,031.9
04/21/21	17:00	1,200.2
04/21/21	18:00	1,290.6
04/21/21	19:00	1,047.3
04/21/21	20:00	794.1
04/21/21	21:00	714.9
04/21/21	22:00	663.3
04/21/21	23:00	454.1
04/22/21	00:00	202.3
04/22/21	01:00	220.0
04/22/21	02:00	487.7
04/22/21	03:00	930.7
04/22/21	04:00	1,260.3

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Source		FLARE08
Parameter		H2SPPMD
Unit		(PPM)
04/22/21	05:00	1,612.1
04/22/21	06:00	2,051.2
04/22/21	07:00	2,701.0
04/22/21	08:00	3,328.4
04/22/21	09:00	3,342.6

Source		FLARE08
Parameter		H2SPPMD
Unit		(PPM)
04/22/21	10:00	4,046.5
04/22/21	11:00	3,451.0
04/22/21	12:00	2,961.5
04/22/21	13:00	1,361.1
04/22/21	14:00	866.8

Source		FLARE08
Parameter		H2SPPMD
Unit		(PPM)
04/22/21	15:00	472.5
04/22/21	16:00	197.1
04/22/21	17:00	39.4

On April 19th, the Coker unit was starting up and off gases generated were vented to the flare until the wet gas compressor was successfully brought online. The wet gas compressor was brought online around 1:34 AM on April 20th and the H_2S in the flare decreased as startup progressed. Since the H_2S level did not decrease below the emission limit once startup of the wet gas compressor was complete, Operations immediately began their search for another source of the H_2S by methodically isolating each unit's battery flare valves. On April 21st, Operations discovered a malfunctioning pressure safety valve (PSV) on the low-pressure flash drum (D-4603) at the No. 6 Distillate Desulfurizer Unit (DD6). The PSV was taken out of service for maintenance.

If you have any questions or need additional information, please contact Maria Aloyo at (340) 692-3781.

Sincerely,

Neil Morgan
VP, Refinery and General Manager
Limetree Bay Refining, LLC

Electronic copy: Verline Marcellin (DPNR)